



WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2002NJ9B

Title: Human Components of Exotic Species Invasion in Urban Forested Wetlands

Project Type: Research

Focus Categories: Wetlands, Ecology, Sediments

Keywords: invasive species, exotic species, urban wetlands, human activities, land use, Arthur Kill

Start Date: 03/01/2002

End Date: 03/01/2003

Federal Funds Requested: \$4,000

Non-Federal Matching Funds Requested: \$8,813

Congressional District: 6th

Principal Investigators:

Heather J. Bowman Cutway
Rutgers University

Joan G. Ehrenfeld
Rutgers University

Abstract

Although wetlands are protected from development, they are not shielded from the effects of the surrounding land use. New Jersey is a state with a long history of development and is under constant pressure to continue to sprawl.

This study will concentrate on the effects of different urban matrices (i.e. residential vs. industrial land use) on the species composition of forested wetland patches in the Arthur Kill watershed.

It will explore the mechanisms by which the particular characteristics of the urban environment and human use increase or decrease an urban wetland's resistance to invasion by exotic plant species. To accomplish this, focus will be on the role land use and human activities have on each component of invasion: (1) seed source, (2) seed dispersal, (3) seed germination, (4) seedling establishment, and (5) population with the goal to determine whether different types of urban development create barriers or corridors for invasion.